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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,541	09/18/2003	Michael J. Porter	2033.66887	5956

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GREER, BURNS & CRAIN
300 S WACKER DR
25TH FLOOR
CHICAGO, IL 60606

EXAMINER

EWALD, MARIA VERONICA

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 08/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/665,541

Applicant(s)

PORTER, MICHAEL J.

Examiner

Maria Veronica D. Ewald

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/03&01/05
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 4, 6 – 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Webb, et al. (U.S. 3,901,634). Webb, et al. teach an embedment device for use in a structural panel production line wherein a slurry is transported on a moving carrier relative to a support frame (column 2, lines 32 – 33), and chopped fibers are deposited upon the slurry (column 1, lines 13 – 15; column 2, lines 6 – 8), said device comprising, a first elongate shaft secured to the support frame and having a plurality of axially-spaced disks (item 42 – figure 1; column 2, lines 43 – 45); a second elongate shaft secured to the support frame and having a second plurality of axially spaced disks (item 44 – figure 1; column 2, lines 43 – 45); said first shaft being disposed relative to said second shaft so that said disks intermesh with each other (item 52 – figure 3; column 3, lines 32 – 35). Webb, et al. further teach that when viewed from the side, peripheries of said first and second pluralities of disks overlap each other (item 52 – figure 3). In addition, the shafts are oriented on the frame to be generally transverse to the direction of movement of the slurry along the production line and the shafts are oriented on the

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frame to be generally parallel to each other (figures 1 and 2; column 2, lines 53 – 58, 61 – 62).

With respect to claims 6 – 8, Webb, et al. teach that the disks are fixed to said corresponding elongate shafts for common rotation (column 2, lines 53 – 58); the first plurality of disks are disposed relative to the frame to create a first trough pattern in the slurry for embedding fibers therein, and the second plurality of disks are disposed relative the frame to create a second trough pattern in the slurry, said second pattern being transversely offset from said first pattern (figure 1, column 3, lines 1 – 8, 32 – 42, 45 – 49); and the shafts are configured to rotate in the same direction (figures 1 and 2; column 2, lines 53 – 58).

Claims 9 – 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Fritsch (U.S. 5,020,916). Fritsch teaches an embedment device for use in embedding fibers into a settable slurry used in producing a structural board on a board production line including a support frame (column 2, lines 48 – 50; column 5, lines 52 – 55, 60 – 62), said device comprising: a first elongate support shaft secured to the frame and having a first plurality of relatively large diameter disks stacked axially along said shaft in between a first plurality of relatively small diameter disks (items 13 and 25 – figure 2; column 6, lines 48 – 54); a second elongate support shaft secured to the frame and having a second plurality of relatively large diameter disks stacked axially along said shaft in between a first plurality of relative small diameter disks (items 13 and 25 – figure 2; column 6, lines 48 – 54), said first and second support shafts positioned

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relative to each other so that said first plurality of relatively large diameter disks are intermeshed with said second plurality of relatively large diameter disks and when viewed, from the side, the peripheries of said relatively large diameter disks overlap each other (item 13 – figure 2; column 6, lines 67 – 68). Furthermore, Fritsch teaches that the large diameter disk and said small diameter disks have a thickness, and said thicknesses of said large diameter disks and said small diameter disks are approximately the same (items 13 and 25 – figure 2; column 3, lines 29 – 30; column 6, lines 48 – 50, 53 – 55); the shafts are oriented on the frame to be generally transverse to the direction of the movement of the slurry along the production line and are generally parallel to each other (item 12 – figure 9; column 6, lines 8 – 10; column 8, lines 46, 51 – 52, 56 – 57); and the disks are fixed to said corresponding elongate shafts for common rotation (column 8, lines 50 – 58).

Claim 14 is rejected under 35 U.S.C. 102(b) as being anticipated by Fritsch. Fritsch teaches an embedment device for use in embedding fibers into a settable slurry used in producing a structural board on a board production line including a support frame (column 2, lines 48 – 50; column 5, lines 52 – 55, 60 – 62), said device comprising: a first elongate support shaft secured to the frame and having a first plurality of relatively large diameter disks stacked axially along said shaft in between a first plurality of relatively small diameter disks (items 13 and 25 – figure 2; column 6, lines 48 – 54); a second elongate support shaft secured to the frame and having a second plurality of relatively large diameter disks stacked axially along said shaft in

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between a first plurality of relative small diameter disks (items 13 and 25 – figure 2; column 6, lines 48 – 54), said first and second support shafts positioned relative to each other so that said first plurality of relatively large diameter disks are intermeshed with said second plurality of relatively large diameter disks (item 13 – figure 2; column 6, lines 13 – 16); and said first and second shafts, and said associated disks, rotate in the same direction (item 12 – figure 9; column 6, lines 5 – 7; column 8, lines 51 – 54).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Webb, et al. in view of Fritsch (U.S. 5,020,916). Webb, et al. teach the characteristics previously described but do not teach that the apparatus has small spacer disks.

In an improved apparatus to continuously mix liquids, suspensions or emulsions, Fritsch teaches the use of a mixer consisting of disk-shaped elements (column 2, lines 25 – 29, 45 – 47). Fritsch teaches that the material is processed by the mixer and continuously spread into thin even layers with a large surface, having “thin film” characteristics (column 2, lines 48 – 50). The apparatus consists of shafts carrying axially stacked disk-shaped elements arranged in rows, lying in parallel, horizontal planes (item 13 – figure 2; column 6, lines 8 – 10). Furthermore, the disks are arranged

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coaxially on the associated shafts, and held by means of coaxial, circular spacer disks at equal, predetermined axial distances with close tolerances (item 25 – figure 2; column 6, lines 52 – 55). The dimensions of the gap between the large disks depend on the type, and viscosity of the material to be processed (column 6, lines 63 – 65).

Furthermore, in another embodiment, the spacer disks prevent drop-shaped accumulations of material between overlapping disk parts from being moved to the thin-layer side from the thick-layer side (column 7, lines 46 – 49).

Therefore, it would have been obvious at the time of the Applicant's invention to one of ordinary skill in the art to modify the compactor of Webb, et al. with the spacer disks of Fritsch for the purposes of maintaining the larger disks on their associated shafts at predetermined distances depending on the type and viscosity of material being processed and to prevent the accumulations of material between overlapping disk parts as taught by Fritsch.

Conclusion

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maria Veronica D. Ewald whose telephone number is 571-272-8519. The examiner can normally be reached on M-F, 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MVE

Joseph S. Del Sole
8/2/05
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